

CERTIFICATE

Issued to:
Applicant:
TCI Telecomunicazioni Italia Srl
Via Parma 14
21047 Saronno (VA), Italy

Licensee:
TCI Telecomunicazioni Italia Srl
Via Parma 14
21047 Saronno (VA), Italy

Product : Electronic controlgear for LED modules
Trade name(s) : TCI, TCI (with little dragon), TCI LED, TCI LED (with little dragon),
TCI LIGHT (with little dragon and ball in square), TCI LIGHT Saronno Italy or
TN101
Type(s)/model(s) : DC ST2 (series) and DC VST (series)

The product and any acceptable variation thereto as specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to EN 61347-1:2015, EN 61347-1:2015/A1:2021, EN 61347-2-13:2014 and EN 61347-2-13:2014/A1:2017
- an inspection of the factory location according to CENELEC Operational Document CIG 021
- a DEKRA certification agreement with the number 6064204

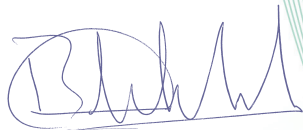
DEKRA hereby grants the right to use the DEKRA Mark.

The DEKRA Mark may be applied to the product as specified in this certificate for the duration and under the conditions of the DEKRA Mark certification agreement.

This certificate is issued on 21 July 2023 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 81-129354

DEKRA Certification B.V.



B.T.M. Holtus
Managing Director



H.R.M. Barends
Certification Manager

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COUNCIL



81-129354

SPECIFICATION OF THE CERTIFIED PRODUCT**Product data**

Product	: Electronic controlgear for LED modules
Trade name(s)	: TCI, TCI (with little dragon), TCI LED, TCI LED (with little dragon), TCI LIGHT (with little dragon and ball in square), TCI LIGHT Saronno Italy or TN101
Type(s)/model(s)	: DC ST2 (series) and DC VST (series)
Primary voltage	: 220-240 V for a.c., 196-250 V for d.c.
Rated frequency	: 50-60 Hz, 0 Hz
Primary current	: From 0,26 to 0,36 A for a.c., 0,32-0,45 A for d.c.
Secondary power	: From 50 to 70 W
Secondary voltage	: From 12 to 48 V
Type of load	: LED modules, power LED
Classification	: Independent, Built in

TESTS**Test requirements**

EN 61347-1:2015
EN 61347-1:2015/A1:2021
EN 61347-2-13:2014
EN 61347-2-13:2014/A1:2017

Test result

The test results are laid down in DEKRA test file 350908000.

Additional information

For specific Model/Type electrical rating refer to following pages.

DEKRA test report No. 3509080.110 is laid down in DEKRA test file 350908000; it contains test results and critical component list.

Conclusion

The examination proved that all requirements were met.

Factory location

TCI Telecomunicazioni Italia SrL
Via Parma 14
21047 Saronno (VA), Italy

General product information: The following products are SELV controlgears for LED modules. The devices have a constant voltage output.									
Type/s	Primary voltage [1]	Primary Current (A)	Power Factor	Secondary Power (W)	Secondary Voltage (V)	U _{out} (V)	t _a (°C)	t _c (°C)	Classification [3]
DC 70W 48V ST2 (K2113)	220-240 V 50-60 Hz 176-275 V 0 Hz	0,36 0,45 A	0,97	70	48	50	-40..45	70	IND, IP67, I, 100, PE
DC 70W 48V ST2 CLII (K2775)									IND, IP67, II, 100
DC 70W 48V VST (K2112)									IND, IP20, I, 100, PE
DC 70W 48V VST II (K2232)									IND, IP20, II
DC 70W 48V VST BI (K2111)									DI, 100, PE
DC 70W 48V VST OF (K2114)									OF
DC 70W 24V ST2 (K2109)	220-240 V 50-60 Hz 176-275 V 0 Hz	0,36 0,45 A	0,97	70	24	25	-40..45	70	IND, IP67, I, 100, PE
DC 70W 24V ST2 CLII (K2776)									IND, IP67, II, 100
DC 70W 24V VST (K2108)									IND, IP20, I, 100, PE
DC 70W 24V VST II (K2233)									IND, IP20, II, 100
DC 70W 24V VST BI (K2107)									DI, 100, PE
DC 70W 24V VST OF (K2110)									OF
DC 70W 12V ST2 (K2026)	220-240 V 50-60 Hz 176-275 V 0 Hz	0,36 0,45 A	0,98	70	12	13	-40..45	70	IND, IP67, I, 100, PE
DC 70W 12V ST2 CLII (K2777)									IND, IP67, II, 100
DC 70W 12V VST (K2021)									IND, IP20, I, 100, PE
DC 70W 12V VST II (K2234)									IND, IP20, II, 100
DC 70W 12V VST BI (K2022)									DI, 100, PE
DC 70W 12V VST OF (K2106)									OF
DC 50W 48V ST2 (K2104)	220-240 V 50-60 Hz 176-275 V 0 Hz	0,26 0,32 A	0,97	50	48	50	-40..45	70	IND, IP67, I, 100, PE
DC 50W 48V ST2 CLII (K2778)									IND, IP67, II, 100
DC 50W 48V VST (K2103)									IND, IP20, I, 100, PE
DC 50W 48V VST II (K2235)									IND, IP20, II, 100
DC 50W 48V VST BI (K2102)									DI, 100, PE
DC 50W 48V VST OF (K2105)									OF

Notes: Kxxxx code can be used as type reference. [1] – The frequency of primary voltage is 50-60 Hz; the products were tested also in 176-275 V operational range according to IEC 61347-2-13 and they can be used for centralized emergency installations in the rated 196-250 V. [2] – Measured on the top of C₇ capacitor. [3] - IND=Independent, IPxx=IP20 or IP67; I=class I; II=class II; BI=built-in; DI=built-in with double insulation; OF=Built-in without enclosure; PE=protective earth; 100= The products have an overheating protection (C.5.a type) and comply with temperature limit of clause 4.16.2 of IEC/EN 60598-1.

Models	DC 70W 48V ST2, DC 70W 24V ST2, DC 70W 12V ST2, DC 50W 48V ST2, DC 50W 24V ST2, DC 50W 12V ST2	DC 70W 48V ST2 CLII, DC 70W 24V ST2 CLII, DC 70W 12V ST2 CLII, DC 50W 48V ST2 CLII, DC 50W 24V ST2 CLII, DC 50W 12V ST2 CLII	Other VST models
Connection type			

Connection to supply (PRI, L, N)	3x 1 mm ² tails	2x 1 mm ² tails	0,75-2,5 mm ² screwless terminals (independent models); (0,5-2,5 mm ² for other)
Connection to load (SEC)	2x 2 mm ² tails		0,5-2,5 mm ² screwless terminals

Additional information		
All models with the enclosure fulfill the requirements for: Impulse withstand category II; Pollution degree 2; Material group IIIa; protection against output short circuit. The material of enclosure was tested for Glow-wire at temperature of 850-960 °C (750-850 °C for IP67 models) with favourable result. The conformal coating (if present) increases the protection against electrostatic discharge, humidity and dust.		
INSULATION (B= basic, S= supplementary, R= double or reinforced)		
DC VST models, DC ST2 models	L, N ↔ earth; L, N, PUSH L ↔ earth	B
DC VST models, DC ST2 models	L, N ↔ SEC; L, N, PUSH L ↔ SEC, OUTPUT LED, ADIM, SYNC, RECEIVER	R
DC VST models, DC ST2 models	Hazardous live parts of independent models ↔ all parts of the enclosure; Hazardous live parts of BI models ↔ all parts of the enclosure (complete or partial) that can come in contact with the luminaire body when incorporated	R
<p>The creepage distances, clearances and connections of control gears in the final application shall be according to IEC/EN 60598-1 or national deviations of the country where installed in the final application. The OF models have been tested in the same enclosure of built-in models, the safety evaluations must be repeated if they will be assembled in a final luminaire with different enclosure.</p> <p>Models with enclosure are suitable for direct mounting on normally flammable surfaces (EN 60598-1).</p> <p>Independent are suitable for centralized emergency installations (par. 22.19 of EN 60598-2-22) up to 50 W.</p> <p>The BI models have similar behavior but shall be verified in the final application.</p>		
<p>Assessment to EN 60598-2-22:2014/A1:2020 used in conjunction with EN IEC 60598-1:2021 has been performed.</p> <p>Assessment to EN 62493:2015 has been performed.</p>		